

# DOCUMENT RESUME

ED 084 790

EM 011 590

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TITLE The Videocassette and Video Disc in the Development of the Communications Media.  
INSTITUTION Children's Television Workshop, New York, N.Y.  
PUB DATE 3 Oct 73  
NOTE 25p.; Paper presented at the International Market for Videocassette and Videodisc Programmes and Equipment (3rd, Cannes, France, September 28 through October 3, 1973)  
EDRS PRICE MF-\$0.65 HC-\$3.29  
DESCRIPTORS Broadcast Industry; Costs; \*Mass Media; Material Development; \*Programing (Broadcast); State of the Art Reviews; \*Video Cassette Systems; Video Equipment; \*Video Tape Recordings  
IDENTIFIERS Software; Video Disc

## ABSTRACT

The videocassette and video disc industries are now at a crucial point, for they have developed excellent hardware systems without developing the software to accompany them. Nearly half a billion dollars will have been spent on hardware development by 1976, but less than one percent of this amount on software. It is now time for the industry to create a demand for its equipment by producing programs which the public wants but cannot obtain elsewhere, just as the movies, radio and television have done. In order to do this, the videocassette and video disc companies must realize that their primary function is not to convert existing entertainment material to their medium, but to create new programs, including services for hospitals, schools, libraries and commercial institutions. If the industry were to invest \$50 million in software development, a multi-billion dollar industry would come into being within three years. (PB)

# International Institute for Videocassette and Videodisc Programmes and Equipment

28 September - 3 October 1973  
Paris des Réservoirs - Cannes - France

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## VIDCA 73

## VIDCA 73

hardware software

existing operational programmes specifically  
systems made for each type  
equipments adapted of use in the videodisc  
to the production and videocassette field  
of videocassettes programmes  
and videodiscs taken from films  
programmes

MICHAEL H. DANN

CLOSING ADDRESS:  
THE VIDEOCASSETTE AND VIDEO DISC IN  
THE DEVELOPMENT OF THE COMMUNICATIONS  
MEDIA

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
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Wednesday, October 3

VIDCA CONVENTION CONFERENCE

THANK YOU MR. \_\_\_\_\_

AS SOME OF MY AMERICAN FRIENDS KNOW, FOR OVER TWO DECADES I DIRECTED THE PROGRAM DEPARTMENTS FOR TWO LEADING COMMERCIAL TELEVISION NETWORKS IN THE UNITED STATES - FIRST NBC AND THEN CBS. I WAS RESPONSIBLE FOR BROADCASTING EVERYTHING FROM "GUNSMOKE" TO THE "CATHOLIC HOUR," PROGRAMS WHICH HAD RATHER DIFFERENT AUDIENCE APPEAL. ESSENTIALLY, SINCE MY JOB WAS TO PLEASE ALL OF THE PEOPLE ALL OF THE TIME, AUDIENCE APPEAL AND APPETITE WERE CRITICAL TO MY DECISIONS.

IN STUDYING THE PUBLIC'S RESPONSE TO THE MEDIA OF TELEVISION I HAD THE OPPORTUNITY TO MAKE MANY MISTAKES - SOME MORE OBVIOUS THAN OTHERS. ON THE OTHER HAND, I HAD ENOUGH SUCCESSES AND LUCK TO KEEP ME DIRECTING ONE OF THE LARGEST PROGRAM OPERATIONS IN THE WORLD FOR A VERY LONG TIME.

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IN MY CAREER, I HAVE WORKED THROUGH THE VARIOUS STAGES OF RADIO, THE SIMULTANEOUS BIRTH OF THE 45 AND LONG PLAYING RECORD, THE ADVENT OF BLACK AND WHITE TELEVISION, THE GROWTH OF COLOR TELEVISION, SATELLITE COMMUNICATION, THE CABLE INDUSTRY, AND FINALLY, THE TRANSMISSION OF THE CLEAR SIGNAL FROM OUR FRIENDS WHO VISITED THE MOON.

IT WAS THIS BACKGROUND THAT PROMPTED YALE UNIVERSITY TO ASK ME LAST FALL TO TEACH A COURSE DESIGNED TO INDICATE AND DEVELOP SOME CONCEPTS THAT MIGHT BE APPLICABLE TO THOSE PIONEERING PEOPLE WHO WERE INVOLVED IN THE NEW COMMUNICATIONS TECHNOLOGY.

DURING THE PAST YEAR I HAVE HAD THE GOOD FORTUNE OF WORKING WITH SOME EXTRA-ORDINARY PEOPLE ON THE CAMPUS AS WELL AS GIFTED LEADERS AND ENGINEERS IN THE MUSHROOMING NEW COMMUNICATIONS TECHNOLOGY.

ON A REGULAR BASIS STUDENTS, INDUSTRY LEADERS, GUESTS, AND MYSELF WERE ABLE TO OBJECTIVELY DISCUSS WHAT WAS TAKING PLACE IN YOUR WORLD. WE WERE ABLE TO RECEIVE QUITE ACCURATE REPORTS ON ALL PHASES OF YOUR INDUSTRY, NOT ONLY FROM READING TRADE PUBLICATIONS, OR SOME GLOOMY REPORTS ON THE FINANCIAL PAGES TELLING OF

THOSE GOING OUT OF BUSINESS. INSTEAD WE ACTUALLY WENT TO YOUR FACTORIES, VISITED YOUR BUSINESS MEETINGS, AND SOME OF YOU WERE EVEN KIND ENOUGH TO VISIT OUR CAMPUS.

AFTER 25 YEARS OF CORPORATE SERVICE, I CAN PARTICULARLY APPRECIATE THE WONDERFUL LUXURY OF BEING ABLE TO SIT BACK AND WATCH VERY AGGRESSIVE, BRIGHT PEOPLE STRIVE TO DEVELOP NOT ONLY A NEW PRODUCT BUT A NEW INDUSTRY.

TODAY, I WANT TO GIVE YOU SOME IMPRESSIONS OF THIS INFANT INDUSTRY IN THE PERSPECTIVE OF ELECTRONIC MEDIA IN THE 20TH CENTURY.

IN THE PAST 6 YEARS, ALMOST 200 MILLION DOLLARS HAVE ACTUALLY BEEN SPENT ON RESEARCH AND HARDWARE DEVELOPMENT FOR THE CASSETTE-DISC INDUSTRY. OF THAT AMOUNT, 1/2 HAS BEEN SPENT BY PEOPLE WHO FAILED AND ARE NO LONGER IN BUSINESS.

IN THE NEXT 2 AND 1/2 YEARS, APPROXIMATELY 225 MILLION MORE DOLLARS WILL BE SPENT

ON PRODUCTION OF HARDWARE, BRINGING US TO A TOTAL OF ALMOST A 1/2 BILLION DOLLARS FOR AN 8 YEAR PERIOD ENDING SOMETIME AROUND SPRING OF 1976.

I AM NOT AN ENGINEER, NOR AN EXPERT ON THE TECHNICAL ASPECTS OF YOUR INDUSTRY. BUT I AM CONVINCED THAT THE MOST AMAZING PART OF YOUR EXTRAORDINARY DEVELOPMENT HAS BEEN THE CREATION OF HIGH QUALITY, SOPHISTICATED RECORDING SYSTEMS. AT THIS POINT IN YOUR INDUSTRY'S LIFE, I THINK IT IS IMPOSSIBLE FOR THOSE OF YOU IN IT TO FULLY APPRECIATE YOUR TECHNICAL ACHIEVEMENTS.

INCIDENTALLY, EVEN ON A LIMITED PRODUCTION BASIS IN AN INFLATIONARY PERIOD, YOUR PRICES ARE NOT OUT OF LINE COMPARED TO THE ORIGINAL \$1,500 PRICE FOR THE POOR BLACK AND WHITE SETS THAT GAVE US SNOWY PICTURES IN THE 1940'S.

I HAVE SEEN DOZENS OF DEMONSTRATIONS OF TECHNIQUES AND EQUIPMENT HERE AT VIDCA AND ELSEWHERE WHICH ARE CONSIDERABLY BETTER THAN MY FIRST MEMORIES OF HEARING A RADIO CRYSTAL SET, THE FIRST 78 LONG PLAYING RECORDS, AND CERTAINLY, THE FIRST VENTURES INTO BLACK AND WHITE AND COLOR PROGRAMMING.

FEW PEOPLE REALIZE WHEN THEY FIRST SAW A RED DOG ON THE TELEVISION SET -- AND WERE SO THRILLED WITH ITS COLOR -- THAT IN REALITY THE RCA AND CBS ENGINEERS WERE REALLY TRYING TO SHOW A BLUE DOG.

I HAVE ALREADY MENTIONED A 1/2 BILLION DOLLAR INVESTMENT FIGURE FOR YOUR WONDERFUL HARDWARE TO BE EXPENDED BY 1976.

BUT, I HAVE FAILED TO MENTION ANY SUBSTANTIAL FIGURES RELATING TO THE DEVELOPMENT OF SOFTWARE OR PROGRAMMING MATERIAL THAT WOULD BE USED BY THE VARIOUS KINDS OF PLAYBACK EQUIPMENT. OUR BEST ESTIMATE FOR THIS DEVELOPMENT PERIOD DURING WHICH YOU WILL SPEND A 1/2 BILLION DOLLARS ON HARDWARE IS THAT ONLY A FEW MILLION DOLLARS WILL HAVE BEEN ALLOCATED FOR SOFTWARE. CERTAINLY, A VERY SMALL RATIO.

WHEN GUTTENBERG DEVELOPED THE PRINTING PRESS, THE FIRST THING HE PRINTED WAS THE BIBLE. HE DIDN'T HAVE TO SPEND A LOT OF MONEY ON THE DEVELOPMENT OF PROPER SOFTWARE. THE BIBLE WAS DIFFICULT TO COME BY SO HE SOLVED THAT PROBLEM. MORE

PEOPLE WERE ABLE TO READ IT, MORE LEGIBLY, AND AT A LOWER PRICE.

NOW, IT DOESN'T TAKE ANYBODY IN THIS AUDIENCE VERY MUCH EFFORT TO REALIZE THAT THE FUNCTION OF YOUR INDUSTRY IS NOT TO MAKE EXISTING MATERIAL LIKE THE BIBLE CHEAPER OR MORE LEGIBLE. QUITE THE CONTRARY, IT IS PRIMARILY TO CREATE AND RECORD MATERIAL NOT NOW AVAILABLE IN ANY FORM. IF YOU THINK THE IMPORTANCE OF THE VIDEO-DISC CASSETTE IS TO SHOW THE EXISTING MOTION PICTURE "WAR AND PEACE" WITHOUT COMMERCIAL INTERRUPTION, YOU HAVE TOILED IN VAIN.

PREOCCUPATION WITH CONVERTING EXISTING MATERIAL TO CARTRIDGE, TAPE, DISC, OR FILM THREATENS TO HOLD BACK THIS INDUSTRY FOR A DECADE. AND, HOLDING BACK THIS INDUSTRY FOR ANY PERIOD OF TIME REPRESENTS NOT ONLY AN ACUTE FINANCIAL PICTURE, BUT THREATENS THE VITAL ROLE YOUR INDUSTRY CAN PLAY IN THE NEW COMMUNICATIONS SOCIETY.

YOUR ROLE IN THE NEW SOCIETY IS SOMETHING THAT IS NOT THE PURPOSE OF MY TALK. YOU HAVE HEARD FROM OTHERS ABOUT THAT. HOWEVER, THE CARTRIDGE AND DISC, LIKE



THE COMPUTER, ARE THE TWO MAIN COMPONENTS OF THE NEW COMMUNICATIONS STRUCTURE.

AND IT IS YOUR INDUSTRY THAT WILL PLAY A DRAMATIC AND MAJOR ROLE WHEN THE WIRED SOCIETY TAKES OVER. FOR THE MOST PART WHEN AND HOW THIS HAPPENS IS SOLELY IN YOUR HANDS.

AND WHILE I AM ON THE SUBJECT OF THINGS YOU CAN CONTROL, I'D LIKE TO RAISE AN ISSUE -- I'M SURE A SENSITIVE ONE -- WHICH IS FAR MORE CRITICAL THAN YOU SUSPECT. IT IS YOUR CONCERN FOR WHICH OF YOUR SYSTEMS WILL FINALLY BE ADAPTED.

YOU ACT AS IF IT WERE AN OLYMPIC RACE WITH 20 ENTRANTS AND ONE WINNER. BY NOW A CONVENTION LIKE THIS SHOULD BE AMPLE EVIDENCE THAT THERE ARE MANY KINDS OF TECHNIQUES AND EQUIPMENT THAT ARE FIRST RATE JUST LIKE THERE ARE MANY GOOD CARS IN THE AUTOMOBILE INDUSTRY -- AND EVEN A FEW POOR ONES THAT ALSO SELL WELL.

THERE IS NOT NOW, NOR WILL THERE EVER BE, ONLY ONE SYSTEM FOR AUDIO VISUAL RECORDING AND PLAYBACK. THERE WILL BE MORE. AND THE NUMBER OF COMPANIES INVOLVED IN THE MANUFACTURING OF THE HARDWARE WILL EVENTUALLY NUMBER IN THE HUNDREDS.

THERE IS NO GREATER DISSERVICE BEING PERFORMED TODAY THAN THOSE OF YOU WHO ESPOUSE THE CAUSE OF THE SINGLE SYSTEM. THIS ONLY CONFUSES THE PUBLIC, THE BUSINESS WORLD, THE CREATIVE COMMUNITY, AND, WORST OF ALL, YOURSELVES.

THESE ARE TRYING TIMES IN THE WORLD. INDECISION BY WAITING FOR THE PERFECT SINGLE SYSTEM IS JUST THE EXCUSE PEOPLE ON THE OTHER SIDE OF THE FENCE NEED FOR MAKING NO DECISION AT ALL.

LET ME STOP RIGHT HERE AND EXAMINE FOR A MOMENT THE DIFFERENCES BETWEEN THE GROWTH OF SOFTWARE IN OTHER COMMUNICATIONS FORMS TO SEE WHAT THE LESSONS ARE FOR YOUR INFANT INDUSTRY.

WE CAN SKIP OVER THE GROWTH OF THE TELEPHONE, AS I THINK THE IMPLICATIONS OF ITS HISTORY ARE NOT AS RELEVANT AS SOME OF THE LATER COMMUNICATIONS FORMS DEVELOPED.

STARTING IN THE EARLY 1900'S WITH THE SILENT MOVIES WE CAN SEE A VERY CLEAR PRECEDENT TO THE GROWTH OF THE MULTI-BILLION DOLLAR MOVIE INDUSTRY OF TODAY.

REMEMBER, THE FILMMAKERS STARTED WITH THE VERY POOREST HARDWARE POSSIBLE.

THERE WAS NO SOUND, NO COLOR, AND THE PICTURES THEMSELVES BARELY MOVED.

IN THE EARLY DAYS OF THE SILENT MOVIE INDUSTRY, FILMS WERE SHOWN IN THE BACK OF BARS, OLD MEETING HOUSES, DIRTY BASEMENTS, ETC. VERY LITTLE ATTENTION WAS EVEN PAID TO PROPER FACILITIES. INSTEAD, THE EMPHASIS WAS ON THE FILMS THEMSELVES. SUCH FAMOUS OLD AMERICAN TITLES AS "THE BIRTH OF A NATION" AND "THE GREAT TRAIN ROBBERY" CAME FROM PEOPLE ONLY SECONDARILY INTERESTED IN EQUIPMENT, BUT FAR MORE INVOLVED IN WHAT THE EXISTING EQUIPMENT ( BAD AS IT WAS) COULD DO.

AND AS THE CREATIVE FILM INDUSTRY GREW, PRESSURE WAS PUT ON THE HARDWARE MANUFACTURERS TO IMPROVE THEIR EQUIPMENT AND ON THE DISTRIBUTORS TO IMPROVE THEIR VIEWING FACILITIES.

ALL OF THIS PRESSURE CAME FROM THE UNPRECEDENTED CREATIVE DRIVE OF ARTISTS, DIRECTORS, PRODUCERS AND FINANCIERS WHO WERE DEDICATED TO THE CONCEPT THAT A PUBLIC TASTE COULD BE CREATED TO SUPPORT AN ENTIRE NEW INDUSTRY. WE DON'T HAVE

TO DWELL ON HOW EXCITED THE PUBLIC BECAME ABOUT FILMS AND THEIR LEGENDARY STARS.

WHILE SPECIFIC MONEY FIGURES ARE NOT EASILY AVAILABLE ABOUT THE INFANT MOVIE INDUSTRY, IT APPEARS THAT ONLY ABOUT 20% OF THE TOTAL HARDWARE EXPENDITURE WAS ALLOCATED FOR THE FILMS THEMSELVES. THIS IS A RATIO OF APPROXIMATELY 1 TO 5.

NOW, THE MOTION PICTURE BUSINESS HAS HAD ITS UPS AND DOWNS, BUT THE PROBLEMS WERE NEVER SOLVED BY ANY SORT OF HARDWARE BREAK-THROUGH OR BY THE INTRODUCTION OF COLOR; IT WAS ESSENTIALLY THE CREATIVE DRIVE OF THE FILMMAKERS THEMSELVES THAT INCREASED THE INTEREST OF THE PUBLIC. TO PUT IT ANOTHER WAY, NO ONE DREAMED THAT A FILM LIKE "THE GODFATHER" COULD GROSS IN EXCESS OF \$100 MILLION DOLLARS, BUT CERTAINLY ITS ABILITY TO SELL THAT MANY TICKETS WAS A DIRECT RESULT OF THE PRODUCER'S EFFORTS, NOT THE QUALITY OF THE PROJECTION EQUIPMENT.

CLEARLY THERE ARE TWO IMPORTANT POINTS TO REMEMBER ABOUT THE INFANT MOTION PICTURE INDUSTRY. FIRST THERE WAS NO SOFTWARE MATERIAL AVAILABLE TO BE SHOWN

THE EQUIPMENT AND, SECOND, THERE WAS NO DEMANDING PUBLIC CLAMORING FOR

MOTION PICTURE PRODUCT. THAT CLAMOR WAS CREATED SOLELY BY THE INDUSTRY ITSELF.

LET ME COMMENT ABOUT THE BIRTH AND GROWTH OF THE RECORD INDUSTRY. FROM THE VERY START, THERE WAS NEVER AN ASSUMPTION THAT PEOPLE WANTED ALVA EDISON'S NEW FANGLED PHONOGRAPH, OR EVEN KNEW WHAT IT WAS. BUT, IN ITS EARLIEST DAYS, THE GREAT ENRICO CARUSO'S MANAGER KNEW FULL WELL THAT THE ARTIST'S VOICE WOULD NOT LAST FOREVER, AND EVEN MORE IMPORTANTLY, THAT A LARGE PART OF THE PUBLIC WOULD NEVER GET TO THE OPERA HOUSE TO BUY TICKETS.

THUS IT WAS NOT DIFFICULT FOR THE RECORD INDUSTRY TO INTEREST PERFORMERS, PARTICULARLY THE MUSICAL PERFORMERS, IN THE PHONOGRAPH INDUSTRY. ARTISTS SAW GOLD AND WANTED IN.

INCIDENTALLY, CAN YOU IMAGINE WHAT WOULD HAVE HAPPENED IF AT THE START THERE HAD BEEN AN ARGUMENT BETWEEN THE PHONOGRAPH MANUFACTURERS OVER THE VALUES OF A 45 RPM SYSTEM OR A 33 AND 1/3 OR A 78, OR TAPE, ETC. IF THAT HAD HAPPENED, THERE IS A 50-50 CHANCE WE WOULD STILL BE WAITING TO HEAR MR. CARUSO'S VOICE

ON SOME SORT OF AUDIO RECORDING.

LATER, NATURALLY, THERE WERE DIFFERENCES IN OPINION ABOUT THE BEST EQUIPMENT, BUT THE AGGRESSIVE COMPETITION BETWEEN THE VARIOUS FORMS HAS INCREASED NOT ONLY THE QUALITY BUT ALSO THE SALES OF THE 45, THE LP AND AUDIO TAPES. THIS HEALTHY COMPETITION IN AN ESTABLISHED INDUSTRY HAS BENEFITED EVERYONE INCLUDING THE ARTIST AND THE PUBLIC. BUT ALL THIS TOOK PLACE AFTER THE PHONOGRAPH BUSINESS HAD A BIG BUYING PUBLIC AND A PROFITABLE INDUSTRY.

THE BIRTH AND GROWTH OF RADIO AND TELEVISION WAS SOMEWHAT DIFFERENT FROM THE RECORD INDUSTRY AND MOTION PICTURES ALTHOUGH THERE ARE SOME PARALLELS WITH THE FILM INDUSTRY. IN 1938 DAVID SARNOFF TOLD THE RADIO MANUFACTURERS ASSOCIATION THAT QUOTE TELEVISION IN THE HOME IS NOW TECHNICALLY FEASIBLE. UNQUOTE. A TRADE MAGAZINE CALLED RADIO GUIDE CONSIDERED THIS HILARIOUS. IT MAILED OUT A PROMOTIONAL PACKAGE CONTAINING A CENTURY PLANT SEED WITH THESE INSTRUCTIONS: QUOTE, PLANT IT IN A POT, WATER IT CAREFULLY, EXPOSE IT TO THE SUNLIGHT. WHEN IT BLOSSOMS, THROW THE SWITCH ON THE NEW TELEVISION CABINET THAT YOUR GRANDSON

WILL HAVE BOUGHT, AND YOU MAY EXPECT TO SEE TV OFFERING PROGRAM QUALITY AND NETWORK COVERAGE COMPARABLE TO THAT OF OUR BROADCASTS TODAY, UNQUOTE. NEEDLESS TO SAY, THE MAGAZINE HAS GONE OUT OF BUSINESS.

OF COURSE, AT THE START, RADIO AND TELEVISION HAD PERFECTLY DREADFUL EQUIPMENT BY TODAY'S STANDARDS AND YET THE PUBLIC BOUGHT THAT EQUIPMENT AT VERY SUBSTANTIAL PRICES. SOME MATERIAL WAS AVAILABLE IN THE REAL WORLD FOR RADIO COVERAGE SUCH AS SPORTING EVENTS, POLITICAL CONVENTIONS, CONCERTS, AND SO FORTH. BUT FOR THE MOST PART, THE PROGRAMS CARRIED OVER THE RADIO IN THE 30'S AND 40'S WERE CREATED EXPLICITLY FOR THE MEDIUM.

BECAUSE OF THE VASTNESS OF THE MEDIUM AND THE AMOUNT OF MONEY SPENT BY THE RADIO SET MANUFACTURERS, THE PERCENTAGE OF MONEY ALLOCATED TOWARDS SOFTWARE WAS LESS THAN IN THE MOVIES. HOWEVER, THE RADIO SET MANUFACTURERS WERE SUPPORTED BY A STRANGE PHENOMENON. THE ADVERTISERS, PARTICULARLY THOSE IN THE UNITED STATES, ALLOCATED SUBSTANTIAL SUMS TO CREATE AND PRESENT PROGRAMMING THAT WOULD SELL THE SETS. IN SOME OF THE OTHER COUNTRIES OF THE WORLD, THE

GOVERNMENTS THEMSELVES PROVIDED FUNDS FOR PROGRAMMING. SO, ESSENTIALLY, THE PROBLEM OF ADEQUATE SOFTWARE TO EXPAND THE RADIO SET INDUSTRY WAS NOT A HARDWARE MANUFACTURERS' PROBLEM.

THE SAME WAS TRUE OF EARLY TELEVISION. AT THE OUTSET, BLACK AND WHITE TELEVISION LIVED OFF OF THE EFFORTS AND FRUITS OF RADIO PROGRAMMING SUPPLIERS -- ADVERTISERS OR GOVERNMENT SUBSIDIES.

I HAVE ALREADY REFERRED TO THE SNOWY PICTURE AND POOR SOUND OF BLACK AND WHITE TELEVISION. HOWEVER, THE PROGRAMS THEMSELVES CREATED AN EXTRAORDINARY EARLY EXCITEMENT BECAUSE OF THE OBVIOUS THRILL OF HAVING A PICTURE THAT MOVED IN ONE'S OWN LIVING ROOM. THE MOVING PICTURE ITSELF ACCOMPANIED BY SOUND WAS ENOUGH TO GET PEOPLE TO GO OUT AND BUY VERY EXPENSIVE TELEVISION SETS EVEN THOUGH THERE WERE BUT A FEW HOURS OF VERY MEDIOCRE PROGRAMMING BROADCAST EACH DAY. AT FIRST, PROGRAMS DID NOT EVEN ORIGINATE FROM DISTANT CITIES AND, EVEN IF THEY HAD, THEY WOULD NOT HAVE BEEN VERY GOOD.



BUT, WHAT FINALLY EXPLODED BLACK AND WHITE SET SALES IN THE UNITED STATES WAS THE CREATION OF MAJOR TELEVISION ATTRACTIONS WHICH COULD NOT BE HEARD ON RADIO.

BY THE LATE 1940S, THANKS MAINLY TO GENERAL DAVID SARNOFF'S INTENSE ZEAL, COLOR TELEVISION BECAME AN ENGINEERING REALITY. AND WHILE THE COLOR STANDARDS WOULD NOT HAVE PLEASED VAN GOGH OR EVEN PICASSO, COLOR DID EXIST AND SETS WERE AVAILABLE.

FOR MANY YEARS, COLOR SET SALES FAILED TO ACHIEVE 1% PENETRATION OF THE BLACK AND WHITE SET SALES. HOWEVER, THIS WAS NOT BECAUSE OF QUALITY OR COST.

REMEMBER, WHEN COLOR SET SALES STARTED TO EXPLODE, THE COSTS WERE STILL TWO TO THREE TIMES THAT OF THE BLACK AND WHITE TELEVISION SET.

WHAT CAUSED COLOR TO EXPLODE WAS THE ABILITY OF THE NETWORKS (NOT THE ADVERTISERS) IN THE UNITED STATES TO PRESENT PROGRAMMING THAT WAS SUBSTANTIALLY BETTER IN COLOR THAN IN BLACK AND WHITE.

WHEN YOU SAW THE DISTINGUISHED MARY MARTIN IN "PETER PAN" FLYING THROUGH THE

AIR AMONG SHIMMERING STARS AGAINST A BLUE BACKGROUND. IT WAS DIFFERENT THAN SEEING AN OLD WESTERN FILM RERUN IN BLACK AND WHITE. WHEN YOU SAW LIVE NETWORK PROGRAMS SHOWING CHERRY BLOSSOMS IN WASHINGTON, D.C. OR THE ROSE BOWL PARADE IN CALIFORNIA IN FULL, BLOOMING COLOR, THE BLACK AND WHITE SET OWNER FELT HE WAS BEING CHEATED AND THIS FORCED HIM TO BUY A NEW COLOR SET EVEN IF IT DID COST \$1,000.

REMEMBER, IT WAS THIS KIND OF PROGRAMMING THAT RCA AND NBC FINANCED -- THE SPECTACULARS -- THAT FORCED COLOR SET SALES. IT WAS NOT THE SHOWING OF OLD COLOR MOTION PICTURE FILMS THAT CREATED THE MARKET FOR COLOR TELEVISION SETS. IN THOSE EARLY YEARS THE ARGUMENT WAS CONSTANTLY RAISED THAT THE PUBLIC DIDN'T CARE ABOUT COLOR TELEVISION ANY MORE THAN THEY DID ABOUT COLOR IN THE MOVIES OR PRINT AND THAT THEY CERTAINLY WERE NOT GOING TO PAY ANYTHING EXTRA FOR IT. WE COULD NOT HAVE BEEN MORE WRONG. ONCE THERE WAS SOMETHING TO SEE, THE PUBLIC INSISTED ON BUYING COLOR SETS.

THIS SAME SOFTWARE PROBLEM DOES NOT ESCAPE TODAY'S INFANT CABLE INDUSTRY EITHER.

RIGHT NOW ALL THE MAJOR CABLE COMPANIES IN THE UNITED STATES ARE DESPERATELY TRYING TO FIND FRESH SOFTWARE ATTRACTIONS TO AMORTIZE THEIR HARDWARE INVESTMENTS AT A FASTER RATE. THESE GIANT CABLE ORGANIZATIONS ARE STARTING TO EXPERIMENT WITH SOME FORM OF PAY TV TO SUPPLEMENT THE REVENUES FROM THEIR REGULAR CABLE SERVICE.

LEADING CABLE OPERATIONS HAVE GONE SO FAR AS TO SAY THEIR COMPANIES CANNOT GROW WITHOUT NEW MONIES FROM NEW PROGRAMMING.

AS ONE LOOKS BACK AT THE INTRODUCTION OF ELECTRONIC GADGETRY STARTING IN 1900, IT IS EVIDENT THAT THE PATTERNS WERE NEVER THE SAME AND CERTAINLY THE VARIOUS COMPANIES THAT PIONEERED THE NEW INDUSTRY NEVER HAD A VERY CAREFULLY THOUGHT-OUT PROGRAM FOR MAKING THE PUBLIC WANT THE NEW PRODUCT.

WHAT WAS CONSTANTLY CLEAR AT ALL TIMES, HOWEVER, WAS THE APPETITE ON THE PART OF THE CREATIVE FRATERNITY OR THE SOFTWARE PEOPLE TOWARDS THE POTENTIAL OF THE NEW PRODUCT.

IT IS OBVIOUS THAT THIS CREATIVE APPETITE, WHICH IS THE VERY ESSENCE FOR SUCCESS, IS AT A LOW EBB FOR YOUR INDUSTRY.

I WOULD NOT FOR ONE MOMENT PRETEND THAT THERE HAS NOT BEEN INTERESTING EXPERIMENTATION BY VARIOUS COMPANIES ON SOME VERY SUCCESSFUL SOFTWARE PROGRAMMING BOTH FOR BUSINESS AND THE CONSUMER. SOME OF YOU HAVE HEARD EARLIER THIS WEEK ABOUT AN EXPERIMENT THE CHILDREN'S TELEVISION WORKSHOP PARTICIPATED IN IN JAMAICA WHERE CASSETTES WERE USED TO TEACH MOUNTAIN CHILDREN WHO HAD NEVER BEFORE SEEN A SINGLE TELEVISION PROGRAM. BUT ISOLATED EXAMPLES OF SOFTWARE DEVELOPMENT REPRESENT SUCH A TINY TRICKLE THAT THEY HAVE HAD LITTLE IMPACT ON THE CREATIVE WORLD.

WHEN YOU TALK, AS I HAVE, TO DIRECTORS, WRITERS, PERFORMERS, LAWYERS, COPYRIGHT EXPERTS, UNION REPRESENTATIVES AND FINANCIERS ABOUT SUPPLYING SOFTWARE FOR THE CASSETTE-DISC INDUSTRY, THEY SHOW AN INDIFFERENCE.

NOW EVERYONE IN THIS ROOM KNOWS THAT TO ACCOMPLISH THE POSSIBLE YOU CERTAINLY

HAVE TO HAVE A VERY POSITIVE ATTITUDE. CREATING SOFTWARE FOR THE THOUSANDS OF DIFFERENT USES THAT CARTRIDGES AND DISCS CAN BE PUT TO REQUIRES A GREAT DEAL OF ENTHUSIASM FROM THOSE WHO MAKE THE PROGRAMS - NOT INDIFFERENCE. SOME OF THE INDIFFERENCE ON THE PART OF THE CREATIVE INDUSTRY, PARTICULARLY THOSE INVOLVED WITH COPYRIGHT CAN BE TRACED TO THEIR CONFUSION OVER WHICH IS THE BEST SYSTEM TO SIGN UP WITH.

LET ME SUGGEST THAT YOU SHOULD TELL YOUR LAWYERS TO SIGN UP ANY OF THE ARTISTS OR WRITERS THEY WANT ON A NON-EXCLUSIVE BASIS AS FAR AS OTHER SYSTEMS ARE CONCERNED. THIS MEANS, NO CREATIVE PERSONS OR THEIR LEGAL REPRESENTATIVES OR MANAGERS WILL HAVE TO WORRY ABOUT LOSING OUT BY SIGNING WITH THE WRONG SYSTEM.

THOSE ON THE OTHER SIDE OF THE FENCE WHO ARE INTERESTED IN PROTECTING THEIR CASSETTE-DISC FUTURE WILL STOP WORRYING AND, INSTEAD, BECOME ACTIVE IN THEIR DESIRE TO SUPPORT A NEW SOURCE OF REVENUE.

THE CARTRIDGE AND THE DISC HAVE AS MANY DIFFERENT USES AS THE COMPUTER OR THE COMBUSTION ENGINE. THEY HAVE EVERY CHANCE OF BEING ALL THINGS TO ALL PEOPLE.

NOW WHAT IS NEEDED ARE IDEAS, NOT FROM THE ENGINEERS, BUT FROM THE PEOPLE WHO PRODUCE IDEAS.

I DON'T WANT TO BORE YOU AT THIS MEETING WITH DETAILED DISCUSSIONS OF THE VARIOUS EXCITING USES THAT I HAVE SEEN THE CARTRIDGE PUT TO OR NEW PLANS FOR ITS POSSIBLE FUTURE USE. RATHER I WANT TO REMIND YOU AGAIN OF SOME VERY STARTLING FACTS. FIRST, LESS THAN 1% OF YOUR INDUSTRY'S ENTIRE BUDGET IS BEING SPENT ON PROGRAM DEVELOPMENT! THIS REPRESENTS THE SMALLEST PERCENTAGE ALLOCATION FOR A NEW INDUSTRY OF THIS KIND, WHICH IN ITSELF SHOULD MAKE YOU WORRY ABOUT EQUIPMENT SALES. IT'S LIKE HAVING A ROCKET WITHOUT A PAYLOAD, OR A TRAIN WITH NO PASSENGERS. SECOND, THE PUBLIC REALLY KNOWS VERY LITTLE ABOUT YOUR INDUSTRY; ONLY THE MOST SOPHISTICATED AUDIO VISUAL EXPERTS ARE REMOTELY AWARE OF ITS TRUE POTENTIAL.

FROM MY PROGRAM BACKGROUND I AM CONVINCED THAT THE CARTRIDGE AND THE DISC WILL NOT BE USED PRIMARILY BY THE ENTERTAINMENT INDUSTRY. INSTEAD, IMAGINATIVE APPLICATION OF CASSETTE AND DISC SOFTWARE WILL BECOME AS NECESSARY TO OUR DAILY

FOR EXAMPLE, HOSPITALS SIMPLY WILL NOT FUNCTION IN THE WORLD TO COME WITHOUT VIEWING OF ELECTRONIC SOFTWARE. DOCTORS WILL NOT READ CHARTS. THEY WILL STUDY RECORDED DATA AS WELL AS PICTURES OF THE PATIENTS THEMSELVES.

LIBRARIES WILL HAVE FAR GREATER BUDGETS FOR THE CASSETTE AND THE DISC THAN THE HARD COVER BOOK ALONE OR EVEN THE HARD COVER, THE PAPERBACK, AND THE MAGAZINE COMBINED.

OUR SECURITY SYSTEMS WILL HAVE TO FUNCTION WITH COMPUTER CONTROLLED CARTRIDGES AND CASSETTE MATERIAL. THIS WILL ALSO BE TRUE OF BANKS AND DEPARTMENT STORES AND ALL THE ORGANIZATIONS WHICH HELP US TO RUN OUR EVERYDAY LIVES MORE EFFICIENTLY. OUR EDUCATIONAL SYSTEM WHICH IS BECOMING INCREASINGLY DEPENDENT ON INSTANT ACCESS TO GREATER AMOUNTS OF NEW INFORMATION AND STATISTICAL DATA WILL GO THROUGH THE GREATEST CHANGE OF ALL.

AND FINALLY ONCE ELECTRONIC AUDIO VISUAL RECORDING IS COMMON PLACE, THE WORLD OF ENTERTAINMENT WILL BE COMPLETELY REVOLUTIONIZED! IT IS POSSIBLE THAT THEATER,

COMMERCIAL NETWORK TELEVISION, MOTION PICTURE HOUSES AND EVEN THE FAMILY CAMERA WILL NOT REMAIN AS WE KNOW THEM TODAY.

FOR THE CREATIVE PERSON, CASSETTES AND DISC, LIKE BOOKS AND FILMS, HAVE A SPECIAL ATTRACTION THAT RADIO AND TELEVISION DOESN'T HAVE. THEY HAVE THAT LASTING QUALITY FOR POSTERITY WHICH GIVES THE CREATIVE PERSON A FEELING OF GREAT SECURITY BECAUSE CREATIVE PEOPLE LIKE TO SEE THEIR WORK RECORDED. TELEVISION AND RADIO AT THE BEGINNING ALWAYS BOTHERED THE CREATIVE MIND BECAUSE THEIR WORK WAS SEEN OR HEARD FOR JUST A FEW EXPOSURES.

YOUR INDUSTRY HAS ACHIEVED A TECHNICAL EXCELLENCE PREVIOUSLY UNEQUALLED BY ANY NEW INDUSTRY. CERTAINLY IT HAS BEEN COSTLY AND PERHAPS NECESSARY IN VIEW OF THE SOPHISTICATED TASTES OF THE BUYER AND THE NEEDS OF OUR TIME.

YOU ARE NOW AT A CRUCIAL POINT. I AM CONVINCED THAT THE COMPANIES WHO WILL BE ON THE TOP ARE THOSE WHO INVEST IN SOFTWARE NOW. THE OTHERS WILL FADE AWAY LIKE THE DUMONT TELEVISION NETWORK DID IN THE UNITED STATES YEARS AGO.



A FEW OF THE LARGE COMPANIES HAVE ALREADY STARTED TO MAKE SOME PROGRESS, BUT NOT ENOUGH TO JUSTIFY THEIR MANAGERMENTS' CONTINUED INTEREST IN THIS NEW INDUSTRY.

CONVINCING AND STIMULATING THE CREATIVE FORCES TO EXPERIMENT, TO DABBLE, TO PLAY WITH IDEAS FOR THE CASSETTE-DISC IS NOT EASY. IT IS EVEN MORE COMPLICATED BECAUSE YOU ARE STARTING WITH PEOPLE WHO ARE SOMEWHAT NEGATIVE, UNINFORMED, AND CONFUSED BY SOME OF THE COMPETITIVE PRACTICES WITHIN THE INDUSTRY.

BUT ALL THIS CAN BE HANDLED. YOU HAVE ACHIEVED TECHNICAL EXCELLENCE. THE WORLD OF TOMORROW IN ELECTRONIC COMMUNICATIONS MUST HAVE A LIVING, CREATIVE CASSETTE-DISC INDUSTRY AS AN INTEGRAL PART OF ITS STRUCTURE. THE ONLY MISSING LINK IS SOFTWARE PRODUCT, BE IT INFORMATIVE, EDUCATIONAL OR ENTERTAINING.

THERE IS NO DOUBT THAT THIS WILL BE A MULTI-BILLION DOLLAR INDUSTRY IN TIME.

IN THE NEXT TWO YEARS IF THIS INDUSTRY CAN GENERATE 50 MILLION DOLLARS WORTH OF SOFTWARE PROGRAMMING DESIGNED SOLELY FOR THE CASSETTE-DISC INDUSTRY, NO MATTER WHAT ITS DERIVATION, WE CAN HAVE A MULTI-BILLION DOLLAR INDUSTRY THREE YEARS THEREAFTER.

YOU MUST REMEMBER THAT RCA AND NBC ALONE SPENT 50 MILLION DOLLARS ON COLOR PROGRAMMING TO FORCE THE COLOR SET SALE EXPLOSION IN THE EARLY 1950'S. WITHOUT SIZABLE PROGRAMMING INVESTMENTS, COLOR SET SALES WOULD HAVE BEEN DELAYED FOR A DECADE.

TODAY, THANKS TO YOUR COLLEAGUES IN THE RELATED COMMUNICATION WORLD, LIVE NEWS IN COLOR IS OFTEN SPREAD THROUGH THE UNIVERSE INSTANTANEOUSLY. NEW MORES AND HABIT PATTERNS CAN BE CREATED OVER NIGHT, JUST AS NEW VIEWING HABITS FOR TELEVISION WERE CREATED TWENTY YEARS AGO WITH THE ADVENT IN THE UNITED STATES OF "THE TODAY SHOW" BROADCAST AT SEVEN O'CLOCK IN THE MORNING.

TELEVISION, RADIO, AND THE PRINTED PAGE ARE NOT YOUR COMPETITION. INSTEAD THEY CAN AND MUST BE USED TO SPREAD THE WORD THAT SOMETHING NEW HAS COME--AND THE TIME HAS NOW COME TO USE IT.

THANK YOU.